# Anticipation of Primary Post Partum Haemorrhage In North Tapanuli Regency

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### Abstract:-

### > Background:

In developing countries, every year the prevalence of HPP is caused by poor labor management, especially at stage III which can cause the mother to lose excessive blood. Midwives, at the forefront of health development, play an important role in increasing the status of maternal health and reducing MMR. One of the basic knowledge and skills of a midwife's competence is the ability to carry out stage III active management to anticipate primary post partum hemorrhage.

### > Purpose:

This study aimed to determine and analyze the performance of midwives in anticipating primary post partum hemorrhage in North Tapanuli Regency.

#### > Methods:

This study is a quantitative study designed with a cross sectional approach. A number of 32 midwives, assisting normal childbirth in October, were taken to be the research samples obtained through purposive sampling technique. The data were analyzed univariately and bivariately with Pearson Product moment correlation and multivariately with multiple linear regression.

### > Results:

Through the logistic regression test results, it was found that the education variable had the greatest and most significant influence on the performance of the midwife, followed by knowledge, motivation and experience. The value of R Square was 0.995 so that the coefficient of determination was 99.5%, meaning that the independent variable had a contribution effect of 99.5% on variable Y and 0.5%, other variables were influenced by other factors but were not included in this study.

### > Conclusion:

The variables of education, motivation, experience and knowledge greatly influence the performance of midwives in anticipating primary post partum hemorrhage so that midwives needed to improve their education, motivation, experience and knowledge to produce optimal and professional performance in anticipating primary post partum hemorrhage.

### I. INTRODUCTION

WHO estimated that 100,000 maternal deaths occur every year, 99% of which are caused by childbirth problems or births that occur in developing countries (Ministry of Health, 2010). [1] It is estimated that there are 14 million cases of bleeding in pregnancy each year, at least 128,000 women bleed to death. About 25% of maternal deaths are caused by postpartum hemorrhage (Setiawan, 2008). Primary postpartum hemorrhage is the most common cause of maternal death, occurring after the delivery period exceeds 500 ml during the third stage of labor or within 24 hours after delivery. [2]

Through the data obtained from the profile of North Tapanuli, 6 mothers died in 2014, the main cause of which was postpartum hemorrhage 3 mothers, eclampsia 2 mothers, and placenta previa 1 mother. [3]

A preliminary study conducted on the perinatal maternal audit team stated that cases of post partum hemorrhage were often found in 19 working areas of Health Center spread across all sub-districts in North Tapanuli Regency, and that there were 25 cases reported each month. Health Center of Sarulla is the health facility that handles the most cases, followed by Health Center of Siatas Barita, Siborong - Borong, and Sipoholon. [3]

Maternal death due to hemorrhage can be caused by when the midwife is tardy in conducting early detection of possible cases of postpartum hemorrhage, resulting in delays in getting help from an adequate referral / health service center. Apart from that, the inadequate ability, experience and skills of midwives and the types of assistance that do not comply with the predetermined standards are also contributing factors.

Sutrisno (2009) defines work performance as a work result achieved by a person while carrying out work activities, while work performance is a record of the results obtained from certain job functions or certain activities during a certain period of time. Loomba (1985) in Azwar (1994), says that performance is a function of the human resource component which includes selection, motivation, training and development. According to Vroom (1965) in Gibson et al (2005), performance is the level of success in carrying out its duties. [4]

The term performance or work performance is a term related to quality and productivity outside of the work output of a person or group of people so that improving the work performance of a person / group is an important part of all levels of management. <sup>[5]</sup>

Performance appraisal, namely the process of assessing the work results of employees in an organization through job appraisal instruments. Gibson (2005) explains that a person's performance depends on 3 (three) factors, namely: individual, psychology and organization. Individual factors consist of abilities or skills, physical and mental conditions, family background, work experience, social level, place of residence, age, gender, and area of origin. Psychological factors consist of perception, personality, training, attitudes, and motivation, as well as organizational factors consisting of resources, leadership, rewards, organizational structure and clear division of tasks. [5]

Active management is a policy that requires prophylactic uterotonics as a preventive measure to reduce the risk of postpartum hemorrhage regardless of maternal obstetric risk status. <sup>[2]</sup> Purpose Management of active third stage management aims to produce more effective uterine contractions so as to shorten the time, prevent bleeding and reduce blood loss in the third stage of labor. The main steps in the management of stage III active management consist of: administration of oxytocin injections, controlled cord tension and tactile stimulation (massage) of the uterine fundus. <sup>[6]</sup>

### > Primary Post Partum Bleeding

Primary postpartum hemorrhage can occur suddenly and can even be very massive. Moderate bleeding but persistent can continue for days or weeks. Primary postpartum hemorrhage can occur earlier, within the first 24 hours after delivery, or later, than 24 hours after delivery. [7] Primary postpartum hemorrhage which is the cause of maternal death in 45% occurs in the first 24 hours after birth, 68-73% within 1 week after birth. [8]

Early postpartum hemorrhage is bleeding that occurs during the third stage of labor or within 24 hours after delivery. The main causes of primary postpartum hemorrhage are uterine atony, retained placenta, remaining placenta, and lacerations of the birth canal as well as impaired blood coagulation occurring in the first 2 hours. [2]

### ➤ Postpartum Hemorrhage Diagnosis

Diagnosis is usually not difficult, especially if large volumes of bleeding occur within a short time. However, when bleeding with a small volume occurs over a long period of time, the patient has lost a lot of blood before he becomes pale, the pulse and respiration speed up and the blood pressure drops. [9]

This can be identified by doing 1) Physical examination: pale, may be accompanied by signs of shock, low blood pressure, rapid pulse, small, cold extremities and visible blood out through the vagina continuously; 2) Obstetric examination: possible flaccid bowel contractions,

the uterus enlarges if there is uterine atony. If the uterine contractions are good, bleeding may be due to a birth canal wound; 3) Gynecological examination: performed in good condition or has been repaired, can detect uterine contractions, birth canal injuries and retention of placental remains. [10]

Therefore, every postpartum mother should be closely monitored to diagnose postpartum hemorrhage. Postpartum hemorrhage does not only occur in those who have a predisposition, but also at every delivery in other words the possibility of postpartum hemorrhage is always there. [11]

### II. METHOD

This research is a quantitative study with a cross sectional approach. [12] A number of 32 midwives, assisting normal childbirth and anticipating primary post-partum hemorrhage, were taken into samples through purposive sampling technique. The data were collected through observation and questionnaires after previously having tested for their validity and reliability. Then the data were analyzed by univariate, bivariate analysis with Pearson Product Moment Correlation and multivariate analysis with Multiple Linear Regression.

### III. RESULTS AND DISCUSSION

### A. RESULTS

## 1. Description of Midwives Performance in Anticipation of Primary Post Partum Hemorrhage in North Tapanuli District

Table 1. Performance of Midwives in Stage III Active Management in North Tapanuli District

Anticipation of Primary Post	e	0/	
Partum Hemorrhage	f	%	
A. Use of Uterotonics			
1. Kinds			
- Oxytocin	31	96,87	
- Metergine	1	03,13	
<ul> <li>Oxytocin and Metergine</li> </ul>	0	0	
2. Administration Time			
- Stage III	7	21,87	
- Stage I & III	13	40,63	
- During Labor Process	12	37,50	
3. Administration Procedure			
- IM	20	62,50	
- IV	0	0	
- IV Drip	12	37,50	
B. PTT			
- Administered			
<ul> <li>Not Administered</li> </ul>	12	37,50	
C. Uterine massage	20	62,50	
- Administered	12	37,50	
- Not Administered	20	62,50	

Source: Processed from primary data

Through the observations, it is known that uterotonic administration was given without clear indication. The perception of midwives in North Tapanuli about oxytocin administration is still not in accordance with the established service standards, most midwives give uterotonic injections from stage I to IV with a dose of 1/2 ampoule and the rest is given after the placenta is complete. There are even some midwives who provide uterotonics by means of drips starting from the 1st stage of labor until the delivery process is complete without indication. This is contrary to the principle of the *ASUHAN SAYANG IBU* program for normal delivery care. Providing uterotonics without a clear indication can increase the risk to the mother and baby, such as: uterine rupture, irregular laceration of the birth canal, and even cause maternal and infant mortality. [6]

Technically, active stage III management includes prophylactic uterotonic (oxytocin) administration, immediate clamping of the umbilical cord after birth of the baby, and controlled stretching of the umbilical cord to deliver the placenta. Active management of the third stage of labor consists of interventions used to accelerate the release of the placenta by increasing uterine contractions and to prevent postpartum bleeding and avoid uterine atony. In contrast to Active Management, Waiting Management (Conservative / physiological) is waiting for signs that the placenta has separated from the uterine wall (umbilical cord lengthens, the uterus is globular and bursts suddenly and briefly), and allowing the placenta to be born spontaneously.

Table. 2. Description of the Performance of Midwives in Stage IV Monitoring in North Tapanuli District

1. Observation his, TTV, Jlh Bleeding

Monitoring Management of Stage IV	f	%
1. Observation his,TTV,Jlh Bleeding in 2 hours PPH		
- Administered	5	15,63
- Not Administered	27	84,37
2. Supporting EIB		
- Yes	0 0	0
- No		100

Source: Processed from primary data

Based on the results of the observations, it was found that only 15.53% of midwives observed postpartum bleeding in mothers. By monitoring within 2 hours post partum, it is hoped that it can prevent and reduce postpartum bleeding that occurs at stage 4. There are times when postpartum bleeding becomes heavy bleeding which in a short time can cause shock to the mother or can be in the form of bleeding that is dripping continuously which is also dangerous because without realizing it ends up bleeding profuse blood and causes shock in the mother. Therefore, it is very important to do the following in every delivery: regular measurement of blood levels, monitoring of blood pressure, pulse, respiration, and examination of uterine contractions for 2 hours. In addition, a careful examination to look for any birth canal injuries that could cause bleeding is necessary. Traumatic or episiotomy wounds are sutured as soon as they are obtained. [13]

Early initiation of breastfeeding (EIB) is important because it can increase the success of exclusive breastfeeding and infant survival. According to Green, the implementation of EIB and the provision of information and education on exclusive breastfeeding is influenced by several factors, including: knowledge and attitudes of mothers, and behavior of health workers. Health workers are required to initiate early breastfeeding for newborns to their

mothers for at least 1 hour and are required to provide information and education on exclusive breastfeeding to mothers and / or family members of the babies from pregnancy checks to the end of the exclusive breastfeeding period. [2]

Through this research it is known that the implementation of EIB is still not optimal in North Tapanuli Regency. EIB is the right action to reduce bleeding in postpartum mothers, because the nipple suction by the baby can stimulate the release of the hormone oxytocin which can increase uterine contractions. Midwives, as health workers, are obliged to carry out EIB and exclusive breastfeeding counseling. Based on Indonesian Ministry of Health Regulation No. 1464 / Menkes / Per / X / 2010 regarding the license and implementation of midwife practices, in practice, midwives are authorized to provide services for breastfeeding mothers by facilitating / providing guidance on early initiation of breastfeeding and promotion of exclusive breastfeeding. Through the research results it is known that mothers have a perception of reduced milk production due to inadequate knowledge of the normal process of breastfeeding, however, most mothers can overcome these problems when they receive proper guidance from health professionals.

## 3. Correlation Analysis of Factors Affecting the Performance of Midwives in the Implementation of Stage III Active Management and Anticipation of Primary Post Partum Hemorrhage

Table 3. Correlation Analysis of Factors Affecting the Performance of Midwives in Anticipating Primary Post Partum Hemorrhage

Variabel Correlation	r value	p-value	Interpretation	
Motivation	0,978	0,000	Substantial Correlation and very significant	
Experience	0,969	0,000	Substantial Correlation and very significant	
Work Load	-0,099	0,295	Non-Substantial Correlation, non-parralel and insignificant	
Co-workers	0,019	0,459	Non-Substantial Correlation and insignificant	
Supervision	0,842	0,000	Substantial Correlation and very significant	
Attitude	0,800	0,000	Substantial Correlation and very significant	
Knowledge	0,970	0,000	Substantial Correlation and very significant	

Source: Processed from primary data

## 1) Correlation between motivation and performance of midwives

According to Muchlas (1997) and Robbins (1996) there are three main keys related to a person's motivation in organizational behavior, namely: the willingness to try, the achievement of organizational goals and the fulfillment of individual needs in the organization. If a person's motivation for a job is minimal, it will result in a low level of work. Muclas (1999) explains the importance of motivation for employees, the higher the employee's motivation, the more tasks or work that can be completed within a certain period. This shows the large quantity of employee work. Where according to Bernardir (2008), that one element of performance is the quantity of work output produced by a worker. [14]

The results of the study using the Pearson Correlation test showed that the p value was 0.000 (p <0.05), which means that there is a significant relationship between motivation and performance, the strength that occurs is strong (rho = 0.978). This tendency is supported by the theory according to Timple which states that one of the factors that influence performance is motivation. The results of this study are also supported by research conducted by Wawan Setiawan (2007) in Tasik Malaya Regency that motivation factors have a relationship with the performance of midwives in the village.

Based on the results of the hypothesis test proving that the work motivation variable (X1) affects the performance of midwives (Y), the t test results are 5,008 and the value of sig. $\alpha$  <0.01. Sig value. which is smaller than  $\alpha=0.01$  indicates that the higher work motivation has a good effect on performance.

### 2) Correlation of Experience with Midwife Performance

One of the predisposing factors for improving performance is experience. Gomes (2005) states that a work experience is needed so that it creates high self-confidence in others. The more experience the midwife has, the more skilled the midwife will be at work. [15]

The results of statistical tests with Pearson test show that experience has a significant effect, the p value is 0.00, the strength of the relationship between the two variables is strong (rho = 0.969). This means that the higher the

experience of the midwife in the village, the more performance it provides, especially in the management of stage III active management and the anticipation of post partum hemorrhage. This result is supported by the theory of Gibson et al (1995), which states that one of the factors that influence individual performance is experience. The more experienced an individual in a job, the higher performance he performs. [5]

The role of individual experience is very important in improving technical maturity work. This means that a person always learns from his entire work or career journey, so that the number of technical errors he makes will decrease so that he produces better work quality. The condition that supports this level of correlation is the tenure of the midwife in the village> 10 years.

Experience is very influential on improving performance. The more cases she handles, the more a midwife understands how to solve them and the higher public's trust put in her. In order for all village midwives to be experienced, one of the efficient efforts that can be done is an apprenticeship program in hospitals and in midwifery practices that handle many deliveries. Thus all village midwives can be empowered as much as possible.

According to the Mother and Child Health manager, the experience of village midwives still needs to be improved through various kinds of training. The data show that there are number of village midwives who have not attended any training related to their duties. What the health office is striving for is to include a Budget and Activity Plan for trainings related to the duties of midwives into the agenda in stages so that all midwives have the opportunity to take part in the training.

## 3) Correlation of Workload and Performance of Midwives

Workload greatly affects individual performance when one is doing his job. Workload is not only seen from physical load but also mental load. Jobs with an excessive workload will reduce productivity and quality of work results, and there is the possibility of delays in carrying out work, unsatisfactory and result in disappointment with the expected results. <sup>[16]</sup>

The workload of village midwives which is quite a lot will have undesirable consequences in their performance, especially when assisting normal delivery because of the large number of activities that midwives have to carry out, starting from monitoring the first stage to 2 hours post partum which often occurs at night. They must be alert and sacrifice time to be with their families, putting aside their positions as wives and mothers of their children.

Respondents tend to have less than optimal performance when they have a heavy perception of workload. Timple states that the workload contains the concept of using basic energy and available reserve energy, a task will be considered heavy if the basic energy has been used up and you still have to use spare energy to complete other tasks.

Based on the results of the Pearson test analysis, it's obtained p value> 0.05, which means that there is no significant relationship between perceived workload and performance, the strength of the relationship between the two variables is weak (rho = 0.019). This research is corroborated by the theory put forward by Ruhimat (2003) if workers feel that the workload to be borne is getting heavier, it means that the work assigned to them is not in accordance with their ability to complete the task. Humans have a limited energy capacity when they have to do several tasks at the same time. Priority competencies will occur between the tasks.

## 4) Correlation between Supervision and Performance of Midwives

Supervision is direct and periodic observation by superiors of the work carried out by the subordinates. If a problem arises, direct instructions or assistance are given to solve it. Mastery and application of correct supervision techniques is one of the main elements in supervision, so that if the supervision can be done properly, it can improve one's performance. <sup>[18]</sup>

The village midwife's need for supervision from the leadership in stage III active management activities and anticipation of primary post-partum hemorrhage is still not in accordance with the needs because the supervision carried out by the coordinating midwife or head of the Health Center is only in the form of facilitative supervision and is carried out unscheduled or on routine based and only applies on a general regular basis. Midwives need direct guidance from their superiors as a form of concern, to motivate them to carry out the work that is their responsibility, especially in providing delivery assistance. Most of the supervision is carried out on the activity results report.

To ensure the employees do the work for which they are responsible, the leaders must always direct, guide, build cooperation and motivate them to perform better so that their individual efforts can improve the appearance of the group in order to achieve organizational goals. Because by carrying out systematic supervision activities it will motivate employees to improve their work performance and produce better work.

The assessment of the activities of the midwife in the village was only based on the results of the monthly reports. Supervision is carried out only 2 times in a year and is not on routine basis. The performance assessment of village midwives has never been carried out, especially regarding the management of stage III active management and the anticipation of primary post-partum hemorrhage in the region.

## 5) Correlation between Colleagues and Midwives' Performance

Humans, as social beings, are required to be able to relate to other people. Being able to establish personal relationships is one of the hallmarks of the quality of human life. Humans need the existence of other people in order to be able to evaluate, help, support and cooperate in facing life's challenges. Individual group assistance to other individuals or other groups is called social support. Social support is more likely to be considered as individual cognition, which starts in terms of objective environmental symptoms and social support is an individual perception of potential support or as perceived helpfulness and supportiveness. [17]

Through the Pearson correlation test, there was no significant relationship found between coworkers and midwives' performance in the management of active third stage management and the anticipation of post-partum hemorrhage (p value> 0.05), because as a professional midwife, she is expected to provide normal delivery assistance independently (not dependent on colleagues) and responsible according to the specified competencies.

## 6) Correlation between Attitudes and Performance of Midwives

Through the results of the Pearson test, a significant relationship is found between attitudes and performance of midwives in the implementation of stage III active management and anticipation of primary post-partum hemorrhage in North Tapanuli Regency in 2015 with p <0.05. A good midwife's performance is also required to behave well.

Attitudes are composed of affective, cognitive and behavioral components. The behavioral component of attitude is closely related to a person's tendency to act. Work behavior shown by employees is actually a picture or a reflection of a person's attitude. This behavior can be changed by increasing knowledge and understanding a positive attitude at work. To agree or take sides means to have a positive attitude. A good attitude is an attitude where employees are willing to do the job without being burdened by something that can become an internal conflict. [18]

## 7) Correlation of Knowledge and Performance of Midwives

Knowledge is an intellectual ability and understanding of the midwife, especially the midwife's competence in anticipating primary post partum hemorrhage. The correlation between the level of knowledge and the performance of midwives based on the results of the Pearson

test showed a significant relationship with p value <0.05. Through the results of the analysis, it was obtained that the value of R=0.970 means that midwives who have a low level of knowledge have a chance of 0.970 times having less performance than those who have a good level of knowledge.

A person's understanding of an object can change and develop according to the abilities, needs, experiences and levels of mobility of information about that object in their environment. Knowledge, in this case an understanding of primary post partum hemorrhage, can form certain beliefs so

that a person behaves according to these beliefs, the implementation of anticipating primary post partum hemorrhage correctly. Besides this, behavior based on knowledge will be more lasting than without knowledge. <sup>[16]</sup> Thus, knowledge is a very important domain to shape one's actions, to anticipate primary post partum hemorrhage according to the procedure.

4. Simultaneous Analysis of Factors Influencing the Performance of Midwives in Anticipating Primary Post Partum Hemorrhage in North Tapanuli District

Table 4.Analysis of the Influence of Various Factors on the Performance of Midwives in Anticipating Primary Post
Partum Hemorrhage in North Tapanuli District

Parameter	Coefficiens Regression	T hit	p (sig)	F	R	R Square
Constant	6,476	6,143	0,000			
Work Motivation	0,369	5,008	0,000	605,021	0,998	0,995
Experience	0,324	3,687	0,001			
Work Load	-0,019	-1,180	0,250			
Co-worker	0,068	1,957	0,063			
Supervision	0,011	0,096	0,924			
Attitude	0,032	1,604	0,122			
Knowledge	0,500	6,733	0,000			
Education	1,038	3,262	0,003			

Source: Processed from primary data

Based on the results of multiple linear regression analysis, it can be concluded that the variable that has the greatest influence on the performance of midwives in the implementation of stage III active management and anticipation of primary post-partum hemorrhage in North Tapanuli Regency in 2015 is education with a value of  $R=1.038\ (p=0.00)$ , followed by knowledge, motivation and experience. Performance is the appearance of personal work, both quantity and quality in an organization, performance can be the appearance of an individual or a work group of personnel.  $^{[18]}$ 

From the analysis, it is known that the performance of midwives is mostly in the poor category (62.50%), the rest is good (37.50%). Through the results of the logistic regression test, it is known that the education variable has the greatest and most significant influence on the performance of the midwife, which is followed by the variables of knowledge, motivation and experience. Meanwhile, age, employee status, workload, and co-workers did not affect the performance of midwives with a p-value> 0.05. The form of the regression equation obtained by performance = 6.476+1.038 X1 + 0.500 X2 + 0.369 X3 + 0.324 X4 + e. The value of R Square is 0.995 so that the coefficient of determination is 99.5%, which means that the independent variable has a contribution effect of up to 99.5% on variable Y and the other 0.5% is influenced by other factors not included in this study.

### IV. CONCLUSIONS AND SUGGESTIONS

Through the results of this study, it is known that the factors that most influence the performance of midwives in North Tapanuli Regency are motivation, experience, knowledge and education. Thus, midwives are expected to improve their knowledge and skills by following the latest developments in the midwife program through seminars, workshops and training, as well as the involvement of professional organizations to facilitate these activities on a regular basis and the need for supervision and evaluation by giving warnings / sanctions to midwives who do not provide services midwifery in accordance with established standards.

### REFERENCES

- [1]. WHO. World Statistical Profile. Geneva: WHO; 2015. (accessed in 24 Oktober 2017). Available: http://www.who.int/gho/countries/idn.pdf?ua=1
- [2]. Myles, 2009. Asuhan Kebidanan.. EGC. Jakarta
- [3]. Taput Regional Public Health Office, 2014. Profil Kesehatan Tapanuli Utara 2014. Head of Regional Public Health Office of Tapanuli Utara. Tarutung.
- [4]. Sutrisno, E. 2009. Manajemen Sumber Daya Manusia. Kencana. Jakarta
- [5]. Gibson, J.L, Ivancevich, J.M, Donnelly, J.H., 2005. Organisasi Perilaku Struktur Proses. 8 ed., Bina Rupa Aksara, Jakarta, 2010, Jilid.1.

- [6]. Wiknjosastro, 2011. Pelatihan Klinik Asuhan Persalinan Normal. Bina Pustaka Sarwono Prawirohardjo. Jakarta.
- [7]. Bobak, *et al.* 2005. Buku Ajar Keperawatan Maternitas. ECG. Jakarta.
- [8]. Prawirohardjo, S. 2011. Ilmu Kebidanan. Bina Pustaka Sarwono Prawirohardjo, Jakarta.
- [9]. Anggraini, Y. 2010. Asuhan Kebidanan Masa Nifas. PustakaRihama. Yogyakarta.
- [10]. Rohmawati, Indri. 2013. Perdarahan Postpartum dan Penanganannya. Available: www.digilub.co.id
- [11]. Sujiyatini, *et al.* 2011. Asuhan Kebidanan II (Persalinan). Rohima Press. Yogyakarta.
- [12]. Sugiyono. 2005. Statistika Untuk Penelitian. CV. Alfabeta. Bandung.
- [13]. Indonesian Health Department. 2004. Buku Acuan Persalinan Normal. Jakarta.
- [14]. Lamere L, 2013. Analisis Kinerja Bidan dalam Pelayanan ANC di Puskesmas Se Kabupaten Gowa. Available: http://repository.unhas.ac.id
- [15]. Gomes. 2000.Manajemen Sumber Daya Manusia. Andi Offset. Yogyakarta
- [16]. Sutrisno, E. 2009. Manajemen Sumber Daya Manusia. Kencana. Jakarta.
- [17]. Timple. 1999. Seri Manajemen Sumber Daya Manusia Kinerja.Cetakan ke-IV. PT. Elex Media Komputindo Kelompok Gramedia. Jakarta.
- [18]. Mangkunegara, A.A.G. 2006. Evaluasi Kinerja Sumber Daya Manusia. Cetakan ke II. PT Refika Aditama. Bandung.